WHAT IS CLAIMED IS:

1.   A method of selecting link metric measurements from at least one of open loop and closed loop measurements, comprising:

sending by a first node a first radio communication;

receiving by a second node the first radio communication over a communication link; and

estimating by the second node the dynamics and condition of the communications channel using at least one of the variance and mean deviation of link metric measurements, the link metric measurements being at least one of symbol error rate (SER), packet error rate (PER), frame error rate (FER), bit error rate (BER), signal to noise ratio (SNR), and received signal strength (RSS).

2.   The method of claim 1, further comprising:

sending by the second receiver, the link metric measurements back to the first node which uses them as its closed loop measurements; and

categorizing the dynamics of the communications channel into one of at least two groups, based on the estimates.

3.   The method of claim 1, wherein the categorizing step uses estimates from more than one link when multiple nodes are to be communicated with simultaneously; and

selecting, based on the chosen group, the use of at least one of closed loop link adaption and open loop link adaption of communication link parameters.

4.   The method of claim 1, wherein the link metric measurements are normalized via at least one of the following methods:

subtraction of transmitted power for the normalization of SNR and RSSI; ·

the transmitted power being indicated in the transmitted message by node 1 to node 2; and

table look-up of transformation for the normalization of SER, PER, or FER from one modulation type to another when more than one modulation type is used.

5.   The method of claim 1, wherein both open loop and closed loop link measurements are selected.

6.   The method of claim 5, wherein the open loop and closed loop link measurements are combined in a weighted sum.

7.   The method of claim 1, wherein the weighted sum is based on an interval between updates and the variance of the link metric measurements.

8.   The method of claim 1, wherein the channel estimates of the Open Loop are chosen when the ratio of a time interval between updates divided byone of the variance and mean deviation of the link metric measurements falls below a preset value.

9.   The method of claim 1, wherein the estimates of the closed loop group are chosen when the ratio of a time interval between updates divided by one of the variance and mean deviation of the link metric measurements exceeds a preset value.

10.   The method of claim 1, further comprising:
        disqualifying the open loop estimates based on the output of an interference detection process.

11.   The method of claim 1, further comprising:
        requesting closed loop measurements when the interval between closed loop measurements exceeds a preset value.

12.   The method of claim 1, further comprising:
        combining link quality measurements made on multiple diversity channels.

13.   A method of changing communication link adaption techniques in a network of radio communication nodes, comprising:
        detecting interference based on an open loop metric;
        estimating using an open loop estimator, the channel dynamics;
        determining, whether transmission parameters should be adjusted based on open loop metrics or closed loop metrics, based on the channel dynamics; and
        adjusting transmission parameters by using a state transition table based on the estimate.

14.   The method of claim 13, further comprising:
        estimating using a closed loop estimator, the channel dynamics.

15.   The method of claim 13, further comprising:

generating by the state transition table at least one of transmit power, modulation type, forward error correction coding gain, diversity level, diversity method, diversity combing method, and frequency spreading.

16.   The method of claim 13, further comprising:

scaling the open loop metric.

17.   The method of claim 16 wherein a scaling factor is derived from the state transition table.

18.   The method of claim 16, wherein a scaling factor is generated based on auxiliary inputs.

19.   The method of claim 18, wherein auxiliary inputs are at least one of a vehicle speed, a vehicle type, and a link closure rate.

20.   The method of claim 13, wherein the state transition table is specific to the environment in which the link adaption is performed.

21.   A method of specifying link quality, comprising:

sending by a first node a first radio communication;

receiving by a second node the first radio communication;

estimating by the second node the dynamics of the communications channel using at least one of the variance and mean deviation of link metric measurements;

transmitting the metric measurements from the second node back to the first node thus comprising the closed loop metrics for the first node.

categorizing the dynamics of the communications channel into one of at least two groups, based on the estimate of more than one link when multiple nodes are to be communicated simultaneously;

selecting, based on the chosen group, the use of at least one of closed loop link adaption and open loop adaption of communication link parameters; and

determining link quality based on the estimate and the selection.

22.   The method of claim 21, wherein the link quality comprises an indication of the probability of a correct packet transmission.

23.   The method of claim 22, wherein the probability is based on a symbol error rate.

24.   The method of claim 21, wherein the link quality comprises an indication of link capacity based on the communication link parameters.

25.   The method of claim 21, wherein the link quality comprises an indication of link margin.

26.   The method of claim 21, wherein the link quality comprises an indication of link stability.

27.   The method of claim 21, wherein the link quality comprises an indication of link performance.

28.   The method of claim 21, wherein the link quality comprises an indication of expected latency through the link.

29.   The method of claim 21, further comprising:

transmitting the metric measurements from the second node back to the first node thus comprising the closed loop metrics for the first node.

30.   The method of claim 21, wherein the categorizing step uses estimates of more than one link when multiple nodes are to be communicated simultaneously.

31.   The method of claim 21, further comprising:

normalizing the transmit power received by the first node.

32.   The method of claim 31, wherein the normalization function utilizes look up table data.